



PATENT  
Docket No. 213542000102

**CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:  
Assistant Commissioner for Patents, Washington, D.C. 20231, on July 31, 2002.

*Laura Shires*  
\_\_\_\_\_  
Laura Shires

**RECEIVED**

AUG 07 2002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

TECH CENTER 1600/2900

In the application of:

Lennart OLSSON and Tatjana  
NARANDA

Serial No.: 10/074,695

Filing Date: February 11, 2002

For: RECEPTOR DERIVED PEPTIDES  
INVOLVED IN MODULATION OF  
RESPONSE TO LIGAND BINDING

Examiner: To Be Assigned

Group Art Unit: 1644

*##7*

**INFORMATION DISCLOSURE  
STATEMENT UNDER 37 C.F.R. § 1.97**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Pursuant to 37 C.F.R. § 1.97 and § 1.98, Applicants submit for consideration in the above-identified application the documents listed on the attached Form PTO-1449. Copies of the documents are also submitted herewith. The Examiner is requested to make these documents of record.

This Information Disclosure Statement is submitted:

- ☐ With the application; accordingly, no fee or separate requirements are required.
- ☒ Within three months of the application filing date or before mailing of a first Office Action on the merits; accordingly, no fee or separate requirements are required.
- ☐ After receipt of a first Office Action on the merits but before mailing of a final Office Action or Notice of Allowance.
  - ☐ A fee is required. A check in the amount of \* is enclosed.
  - ☐ A fee is required. Accordingly, a Fee Transmittal form (PTO/SB/17) is attached to this submission in duplicate.
  - ☐ A Certification under 37 C.F.R. § 1.97(e) is provided below; accordingly; no fee is believed to be due.
- ☐ After mailing of a final Office Action or Notice of Allowance, but before payment of the issue fee.
  - ☐ A Certification under 37 C.F.R. § 1.97(e) is provided below and a check in the amount of \* is enclosed.
  - ☐ A Certification under 37 C.F.R. § 1.97(e) is provided below and a Fee Transmittal form (PTO/SB/17) is attached to this submission in duplicate.

Applicants would appreciate the Examiner initialing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

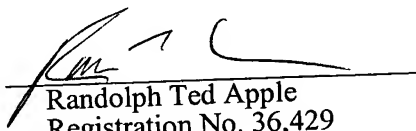
The information contained in this Information Disclosure Statement under 37 C.F.R. § 1.97 is not to be construed as a representation that: (i) a complete search has been made; (ii) additional information material to the examination of this application does not exist; (iii) the information, protocols, results and the like reported by third parties are accurate or enabling; or (iv) the above information constitutes prior art to the subject invention.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Assistant Commissioner to

charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing 213542000102. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Dated: July 31, 2002

Respectfully submitted,

By:   
Randolph Ted Apple  
Registration No. 36,429

Morrison & Foerster LLP  
755 Page Mill Road  
Palo Alto, California 94304-1018  
Telephone: (650) 813-5933  
Facsimile: (650) 494-0792

Form PTO-1449 <b>INFORMATION DISCLOSURE CITATION</b> <b>IN AN APPLICATION</b> <i>(Use several sheets if necessary)</i>	Docket Number 213542000102	Application Number 10/074,695
	Applicant Lennart OLSSON and Tatjana NARANDA	
	Filing Date February 11, 2002	Group Art Unit 1644
	Mailing Date July 31, 2002	



TECH CENTER 1600/2900

AUG 07 2002

RECEIVED

### U.S. PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Name	Class	Subclass	Filing Date If Appropriate
	1.	01/31/1995	5,385,888	Goodenow et al.			
	2.	06/17/1997	5,639,458	Olsson et al.			
	3.	12/08/1998	5,846,827	Celis et al.			
	4.	12/29/1998	5,853,999	Olsson et al.			
	5.	03/23/1999	5,885,574	Elliot			

### FOREIGN PATENT DOCUMENTS

Examiner Initials	Ref. No.	Date	Document No.	Country	Class	Subclass	Translation YES NO	
	6.	07/26/1990	WO 90/08161	WIPO				
	7.	09/07/1990	WO 90/10016	WIPO				
	8.	11/14/1991	WO 91/17253	WIPO				
	9.	09/16/1993	WO 93/17699	WIPO				
	10.	02/23/1995	WO 95/05189	WIPO				
	11.	02/08/1996	WO 96/03438	WIPO				
	12.	05/23/1996	WO 96/15426	WIPO				
	13.	11/14/1996	WO 96/35443	WIPO				
	14.	09/12/1997	WO 97/32899	WIPO				

### OTHER DOCUMENTS

*(including author, title, Date, Pertinent Pages, Etc.)*

Examiner Initials	Ref. No.	Title
	15.	Ebina et al. (1985). "The human insulin receptor cDNA: the structural basis for hormone-activated transmembrane signalling," <i>Cell</i> 40:747-758.
	16.	EMBL accession number M38027, published by Fukunaga et al. (1990), visited on June 6, 2002.
	17.	EMBL accession number M59820, published by Fukunaga et al. (1990), visited on June 6, 2002.
	18.	EMBL accession number X55720, published by Larsen et al. (1990), visited on June 6, 2002.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

Form PTO-1449	Docket Number 213542000102	Application Number 10/074,698
<b>INFORMATION DISCLOSURE CITATION</b> <b>IN AN APPLICATION</b> (Use several sheets if necessary)	Applicant Lennart OLSSON and Tatjana NARANDA	
	Filing Date February 11, 2002	Group Art Unit 1644
	Mailing Date July 31, 2002	

19.	EMBL accession number X55721, published by Larsen et al. (1990), visited on June 6, 2002.
20.	Fukumoto et al. (1989). "Cloning and characterization of the major insulin-responsive glucose transporter expressed in human skeletal muscle and other insulin-responsive tissues," <i>J. Biol. Chem.</i> 264(14):7776-7779.
21.	GenBank Accession No. D28561, published by Kasahara et al. (1997), visited on June 10, 2002.
22.	GenBank Accession No. M20747, published by Fukumoto et al. (1989), visited on June 10, 2002.
23.	GenBank Accession No. A18657, published by by WO 91/17253.
24.	GenBank Accession No. U43168, published by Tartaglia et al. (1995), visited on June 10, 2002.
25.	GenBank Accession No. U32324, published by Van Leuvan (1995), visited on June 10, 2002.
26.	GenBank Accession No. U31993, published by Yao et al. (1995), visited on June 10, 2002.
27.	Gribskov and Burgess (1986). "Sigma factors from <i>E. Coli</i> , <i>B. subtilis</i> , phage SP01, and phage T4 are homologous proteins," <i>Nucl. Acids Res.</i> 14(16):6745-6763.
28.	Haft et al. (1994). "Involvement of dileucine motifs in the internalization and degradation of the insulin receptor," <i>J. Biol. Chem.</i> 269(42):26286-26294.
29.	Hamer (1997). "Dual role of a dileucine motif in insulin receptor endocytosis," <i>J. Biol. Chem.</i> 272(35):21685-21691.
30.	Hansen et al. (1989). "Inhibition of insulin receptor phosphorylation by peptides derived from major histocompatibility complex class I antigens," <i>PNAS USA</i> 86:3123-3126.
31.	Korpi and Seeburg (1993). "Natural mutation of GABA <sub>A</sub> receptor alpha6 subunit alters benzodiazepine affinity but not allosteric GABA effects," <i>Eur. J. Pharm.</i> 247:23-17.
32.	Larsen et al. (1990). "Expression cloning of human granulocyte colony-stimulating factor receptor: A structural mosaic of hematopoietin receptor, immunoglobulin, and fibronectin domains," <i>J. Exp. Med.</i> 172:1559-1570.
33.	Leonard et al. (1984). "Molecular cloning and expression of cDNAs for the human interleukin-2 receptor," <i>Nature</i> 311:626-631.
34.	Levy-Toledano et al. (1993). "Deletion of C-terminal 113 amino acids impairs processing and internalization of human insulin receptor: comparison of receptors expressed in CHO and NIH-3T3 cells," <i>Biochem. Biophys. Acta.</i> 1220:1-14.
35.	Li et al. (1994). "An irregularity in the transmembrane domain helix correlates with the rate of insulin receptor internalization," <i>J. Biol. Chem.</i> 269(33):14333-14338.
36.	Naranda et al. (1997). "A peptide derived from an extracellular domain selectively inhibits receptor internalization: target sequences on insulin and insulin-like growth factor 1 receptors," <i>PNAS USA</i> 94:11692-11697.
37.	Naranda et al. (1999). "Activation of erythropoietin receptor in the absence of hormone by a peptide that binds to a domain different from the hormone binding site," <i>PNAS USA</i> 96:7569-7974.

EXAMINER:	DATE CONSIDERED:
EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.	

Form PTO-1449

Docket Number 213542000102

Application Number 10/074,695

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**

AUG 05 2002

(Use several sheets if necessary)

Applicant

Lennart OLSSON and Tatjana NARANDA

Filing Date February 11, 2002

Group Art Unit 1644

Mailing Date July 31, 2002

AUG 07 2002

TECH CENTER 1600/2900

38.	Ngo et al. "The protein folding problem and tertiary structure prediction," Merz & LeGrand, Birkhauser Boston pp. 491-495.
39.	Olsson et al. (1994). "Regulation of receptor internalization by the major histocompatibility complex class I molecule," <i>PNAS USA</i> 91:9086-9090.
40.	Piper et al. (1992). "The efficient intracellular sequestration of the insulin-regulatable glucose transported (GLUT-4) is conferred by the NH2 terminus," <i>J. Cell Biol.</i> 117(4):729-743.
41.	Rajagopalan et al. (1995). "Chimeric receptors expressing juxtamembrane sequences of the insulin receptor undergo rapid endocytosis in the absence of receptor tyrosine kinase activity," <i>Biochem. Biophys. Res. Commun.</i> 211(3):714-718.
42.	Rudinger (1976). "Characteristics of the amino acids as components of a peptide hormone sequence," <i>In Peptide Hormones</i> J. Parsons ed. University Park Press: Baltimore, MD pp. 1-7.
43.	Salgaller et al. (1994). "Generation of specific anti-melanoma reactivity by stimulation of human tumor-infiltrating lymphocytes with Mage-1 synthetic peptide," <i>Canc. Immunol. Immunother.</i> 39:105-116.
44.	Silver et al. (1992). "Atomic structure of a human MHC insulin molecule presenting an influenza virus peptide," <i>Nature</i> 360:367-369.
45.	Stagsted et al. (1990). "Regulation of insulin receptor functions by a peptide derived from a major histocompatibility complex class I antigen," <i>Cell</i> 62:297-307
46.	Stagsted et al. (1991). "A preformed, ordered structure of a 25-residue peptide derived from a major histocompatibility complex class I antigen is required to affect insulin receptor function," <i>J. Biol. Chem.</i> 266(20):12844-12847.
47.	Stagsted et al. (1993). "Correlation between insulin receptor occupancy and tyrosine kinase activity at low insulin concentrations and effect of major histocompatibility complex class I-derived peptide," <i>J. Pharm. Exper. Therap.</i> 267(2):997-1001.
48.	Stagsted et al. (1993). "Inhibition of internalization of glucose transporters and IGF_II receptors," <i>J. Biol. Chem.</i> 268(30):22809-22813.
49.	Staubs et al. (1994). "Localization of the insulin receptor binding sites for the SH2 domain proteins p85, Syp, and GAP," <i>J. Biol. Chem.</i> 269(44):27186-27192.
50.	Strader et al. (1989). "Structural basis of beta-adrenergic receptor function," <i>FASEB J.</i> 3:1825-1832.
51.	Swissprot accession number P00533, published by Ullrich et al. (1984), visited on 6/6/2002.
52.	Swissprot accession number P08887, published by Yamasaki et al. (1998), visited on 6/6/2002.
53.	Swissprot accession number P19235, published by Ehrenman (1991), visited on 6/6/2002.
54.	Swissprot accession number P24024, published by Tong et al. (1990), visited on 6/6/2002.
55.	Swissprot accession number P25025, published by Murphy et al. (1991), visited on 6/6/2002.
56.	Swissprot accession number P40238, published by Vigon et al. (1992), visited on 6/6/2002.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.

Form PTO-1449

Docket Number 213542000102

Application Number 10/074,695

**INFORMATION DISCLOSURE CITATION  
IN AN APPLICATION**

(Use several sheets if necessary)

Applicant

Lennart OLSSON and Tatjana NARANDA

Filing Date February 11, 2002

Group Art Unit 1644

Mailing Date July 31, 2002

AUG 05 2002

- |     |  |
|-----|--|
| 57. | Swissprot accession number P42701, published by Chua et al. (1994), visited on 6/6/2002.   |
| 58. | Tartaglia et al. (1995). "Identification and expression cloning of leptin receptor, OB-R," <i>Cell</i> 83:1263-1271.   |
| 59. | Ullrich et al. (1984). "Human epidermal growth factor receptor cDNA sequence and aberrant expression of the amplified gene A431 epidermoid carcinoma cells," <i>Nature</i> 309:418-425.      |
| 60. | Verhey et al. (1995). "Distinct signals in the GLUT4 glucose transporter for internalization and for targeting to an insulin-responsive compartment," <i>J. Cell Biol.</i> 130(5):1071-1079. |
| 61. | Verland et al. (1989). "Specific molecular interaction between the insulin receptor and a D product of MHC class 1," <i>J. Immun.</i> 143(3):945-951.  |

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not the citation conforms with MPEP 609. Draw a line through the citation if not in conformance and not considered. Include a copy of this form with next communication to applicant.



1644

PTO/SB/21 (08-00)

Please type and sign (+) inside this box → +

Approved for use through 10/31/02. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<h2 style="margin: 0;">TRANSMITTAL FORM</h2> <p style="margin: 5px 0;">(to be used for all correspondence after initial filing)</p>	<b>Application Number</b>	10/074,695
	<b>Filing Date</b>	February 11, 2002
	<b>First Named Inventor</b>	Lennart OLSSON
	<b>Group Art Unit</b>	1644
	<b>Examiner Name</b>	To Be Assigned
<b>Total Number Of Pages In This Submission</b>	12 + 61 references	<b>Attorney Docket No.</b> 213542000102

RECEIVED

AUG 07 2002

TECH CENTER 1600/2900

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declarations <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement - 3 pages <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): 1. Form PTO-1449 + copy - 8 pages 2. Sixty-one (61) references 3. Return postcard
<input type="checkbox"/> Remarks		

SIGNATURE OF APPLICANT, ATTORNEY OR AGENT	
Firm or Individual Name	Morrison & Foerster LLP, 755 Page Mill Road, Palo Alto, California 94304-1018  Randolph Ted Apple (Registration No. 36,429)
Signature	
Date	July 31, 2002

<b>CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"</b>
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on July 31, 2002.
 _____ Laura Shires

Burden Hours Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.